(19) Canadian Intellectual Property Office
An Agency of Industry Canada

Office de la Propriété Intellectuelle du Canada
Un organisme d'Industrie Canada

(11) CA 2 240 815 (13) A1
(43) 16.12.1999

(12)

(21) 2 240 815

(51) Int. Cl.[6]: E04G 001/15, E21C 009/00

(22) 16.06.1998

(71) MORISON, Alan Bruce,
P.O. Box 827, WEMBLEY, A1 (CA).

(72) MORISON, Alan Bruce (CA).

(74) Thompson, Douglas B.

(54) PLATE-FORME DE REPARTITION DE LA CHARGE
(54) LOAD DISTRIBUTION PLATFORM

(57)

A load distribution platform has a metal framework having a peripheral edge, a top and a bottom. The metal framework defines a plurality of openings. Each opening is bordered by an inwardly projecting peripheral top flange and an inwardly projecting peripheral bottom flange. Blocks are positioned in each of the openings confined by the peripheral top flange and peripheral bottom flange. It is preferred that the blocks be made of recycle vehicular tires.

OPIC
Office de la propriété intellectuelle du Canada

CIPO
Canadian Intellectual Property Office

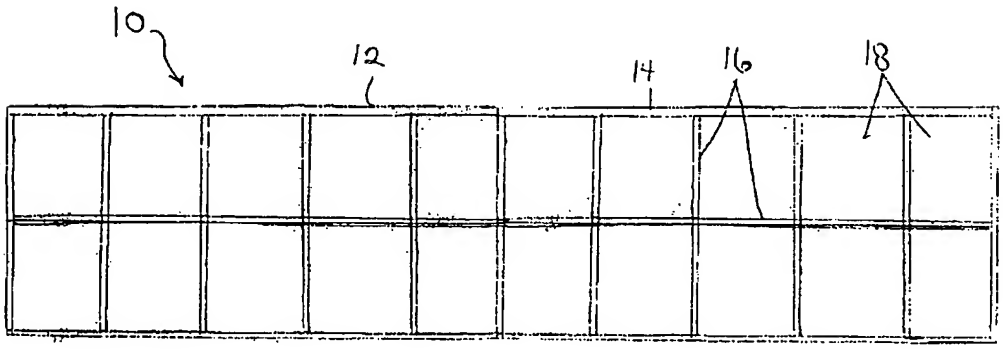
(12) (19) (CA) **Demande-Application**

(21) (A1) **2,240,815**
(22) 1998/06/16
(43) 1999/12/16

(72) MORISON, Alan Bruce, CA
(71) MORISON, Alan Bruce, CA

(51) Int.Cl.[6] E04G 1/15, E21C 9/00

(54) **PLATE-FORME DE REPARTITION DE LA CHARGE**
(54) **LOAD DISTRIBUTION PLATFORM**



(57) A load distribution platform has a metal framework having a peripheral edge, a top and a bottom. The metal framework defines a plurality of openings. Each opening is bordered by an inwardly projecting peripheral top flange and an inwardly projecting peripheral bottom flange. Blocks are positioned in each of the openings confined by the peripheral top flange and peripheral bottom flange. It is preferred that the blocks be made of recycle vehicular tires.

ABSTRACT OF THE DISCLOSURE

A load distribution platform has a metal framework having a peripheral edge, a top and a bottom. The metal framework defines a plurality of openings. Each opening is bordered by an inwardly projecting peripheral top flange and an inwardly projecting peripheral bottom flange. Blocks are positioned in each of the openings confined by the peripheral top flange and peripheral bottom flange. It is preferred that the blocks be made of recycle vehicular tires.

TITLE OF THE INVENTION:

load distribution platform

NAME(S) OF INVENTOR(S):

Alan Bruce Morison

FIELD OF THE INVENTION

The present invention relates to a load distribution platform.

BACKGROUND OF THE INVENTION

There is a limit as to how much weight a ground surface cannot withstand before the soil become unstable and subsides. It has become a recognized practise to place a load distribution platform under any object that is of such a weight that it might adversely affect soil stability. The load distribution platform distributes the weight of the object over a large area so that the pounds per square inch acting upon the ground surface is reduced to a level the soil can sustain without subsiding.

In the oil industry, the load distribution platforms used at remote drill sites have historically been made of wood. These wood load distribution platforms have a number of inherent disadvantages. Over prolonged usage the wood tends to become saturated with water, oil or both. Water saturation results in a deterioration and decomposition of the wood. Oil saturation turns the load distribution platform into a potential fire hazard. Either type of saturation increases the weight of the load distribution platform when the time comes to move it to the next drill site. Oil saturation can lead to environmental contamination of any site where the load distribution platform is positioned for any length of time.

SUMMARY OF THE INVENTION

What is required is an alternative form of load

distribution platform.

According to the present invention there is provided a load distribution platform, including a metal framework having a peripheral edge, a top and a bottom. The metal framework defines a plurality of openings. Each opening is bordered by an inwardly projecting peripheral top flange and an inwardly projecting peripheral bottom flange. Water and oil resistant blocks are positioned in each of the openings confined by the peripheral top flange and peripheral bottom flange.

Although there are other materials that would be suitable, it is preferred that the blocks for the load distribution platform described above be made from recycled vehicular tires. Finding uses for recycled vehicular tires has been a matter of serious environmental concern. Whether recycled vehicular tires are used or other materials, the load distribution platform described above provides numerous advantages over the prior art. They are more durable than similar structures made of wood. They are more resistant to and do not absorb either water or oil. This means that they maintain a more constant weight for transport and do not contaminate the site to which they are moved.

BRIEF DESCRIPTION OF THE DRAWINGS

These and other features of the invention will become more apparent from the following description in which reference is made to the appended drawings, wherein:

FIGURE 1 is a top plan view of a load distribution platform constructed in accordance with the teachings of the present invention.

FIGURE 2 is a side elevation view, in section, of the load distribution platform illustrated in **FIGURE 1**.

FIGURE 3 is side elevation view of a portion of the load distribution platform illustrated in **FIGURE 1**.

FIGURE 4 is a detailed perspective view of as surface of one of rubber blocks from the load distribution platform

illustrated in **FIGURE 1**.

FIGURE 5 is a top plan view, in section, of a portion of the load distribution platform illustrated in **FIGURE 1**.

FIGURE 6 is side elevation view, in section, of one of the rubber blocks from the load distribution platform illustrated in **FIGURE 1**.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

The preferred embodiment, a load distribution platform generally identified by reference numeral 10, will now be described with reference to **FIGURES 1** through **6**.

Referring to **FIGURE 1**, load distribution platform 10 has a metal framework 12 made from structural steel. Metal Framework 12 has a peripheral edge 14 and has cross members 16 which serve to divide metal framework 12 into a plurality of openings 18. Referring to **FIGURE 2**, metal framework 12 has a top 20 and a bottom 22. Each of openings 18 is bordered by an inwardly projecting peripheral top flange 24 at top 20 and an inwardly projecting peripheral bottom flange 26 at bottom 22. Water and oil resistant blocks 28 made from recycled vehicular tires are positioned in each of openings 18 confined by peripheral top flange 24 and peripheral bottom flange 26. Blocks 28 are preferably compressed into openings 18 using hydraulic presses prior to peripheral bottom flange 26 being welded in place. Peripheral bottom flange 26 is then welded in place to prevent blocks 28 from being removed from openings 18.

While openings 18 can be made in a variety of shapes. Rectangular openings are preferred, because it simplifies the construction of metal framework 12. Although metal framework can be made to virtually any dimension, the standard dimensions currently in use are eight feet in width and forty feet in length. Openings are preferably made either four feet in width and four feet in length or four feet in width and eight feet in length. The depth between top peripheral flange 24 and

bottom peripheral flange 26 is preferably six inches. Blocks 28 that fit into openings 18 are, rectangular and plinth-like.

Referring to **FIGURE** 3, it is preferred that a pipe roll 30 be welded to a portion of peripheral edge 14. Pipe roll 30 is used during loading and unloading of metal framework 12 onto trucks.

Referring to **FIGURE 4**, it is preferred that block 28 have a plurality of dimples 32 to create a non-slip walking surface 33. Dimples 32, as illustrated, are intended to depict squares two inches by two inches. It is also preferred that a fire retardant chemical be added to the recycled vehicular tires at the time of manufacture of blocks 28 to improve their fire retardant properties. It is also preferred that luminescent lines be placed on blocks 28 that are positioned at peripheral edge 14 as a safety feature, to reduce the likelihood of a person from inadvertently falling off load distribution platform 10 at night. Blocks 28 provide a non-static surface.

Referring to **FIGURE 6**, it is preferred that reinforcement rods 34 be moulded into blocks 28. Referring to **FIGURE 5**, rods 34 are welded to metal framework 12 to reduce the possibility of blocks 28 being pushed through openings 18 by the weight of a load. Referring to **FIGURE 6**, it is also preferred that blocks 28 be trimmed along peripheral edge 36, so that when block 28 is fit into metal framework 12, non-slip surface 33 is substantially flush with metal framework 12.

It will be apparent to one skilled in the art that modifications may be made to the illustrated embodiment without departing from the spirit and scope of the invention as hereinafter defined in the Claims.

THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. A load distribution platform, comprising:

a metal framework having a peripheral edge, a top and a bottom, the metal frame work defining a plurality of openings, each opening being bordered by an inwardly projecting peripheral top flange and an inwardly projecting peripheral bottom flange; and

water and oil resistant blocks positioned in each of the openings confined by the peripheral top flange and peripheral bottom flange.

2. The load distribution platform as defined in Claim 1, wherein the blocks are made from recycled vehicular tires.

3. The load distribution platform as defined in Claim 1, wherein a pipe roll is welded to a portion of the peripheral edge thereby facilitating loading and unloading of the metal framework.

4. The load distribution platform as defined in Claim 1, wherein the openings are rectangular.

5. The load distribution platform as defined in Claim 1, wherein the metal framework is eight feet in width and forty feet in length.

6. The load distribution platform as defined in Claim 1, wherein the openings are four feet in width and four feet in length with six inches in depth between the top peripheral flange and the bottom peripheral flange.

7. The load distribution platform as defined in Claim 1, wherein the blocks have reinforcing rods extending therethrough, the reinforcing rods being secured to the metal framework.

8. A load distribution platform, comprising:

a metal framework having a peripheral edge, a top and a bottom, the metal frame work defining a plurality of rectangular openings, each rectangular opening being bordered by an inwardly projecting peripheral top flange and an inwardly projecting peripheral bottom flange; and

plinth-like blocks made from recycled vehicular tires positioned in each of the rectangular openings confined by the peripheral top flange and peripheral bottom flange, the blocks having reinforcing rods extending therethrough, the reinforcing rods being secured to the metal framework.

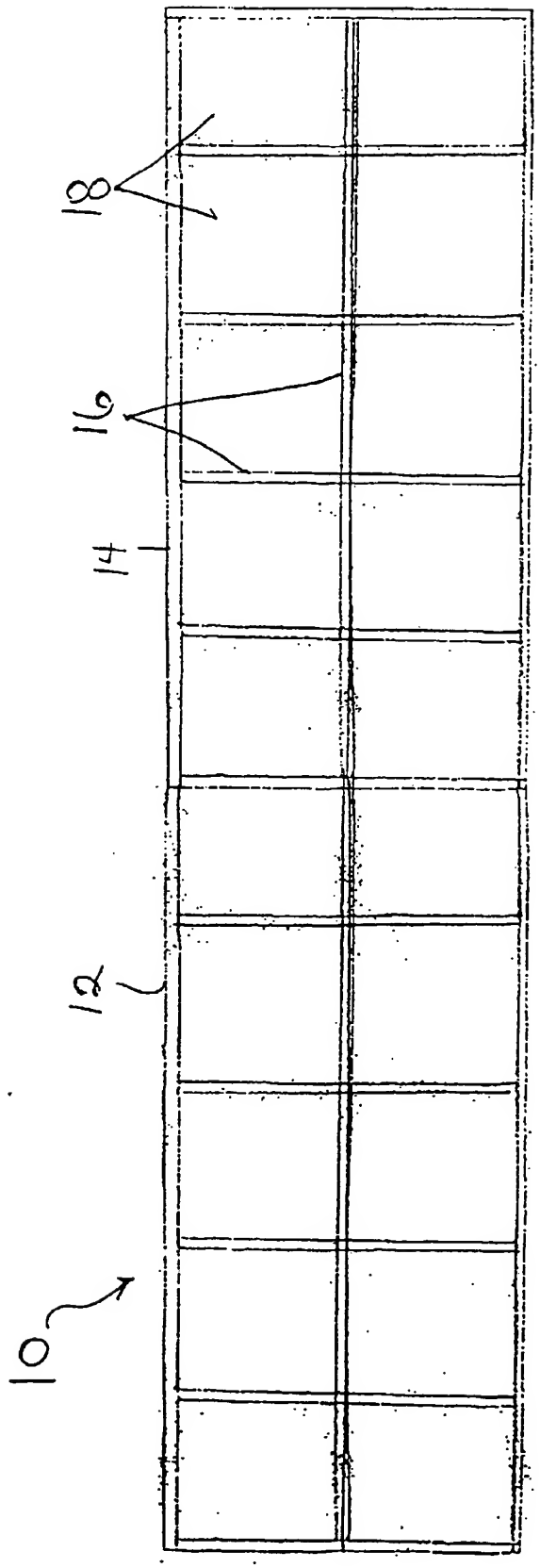


FIGURE 1

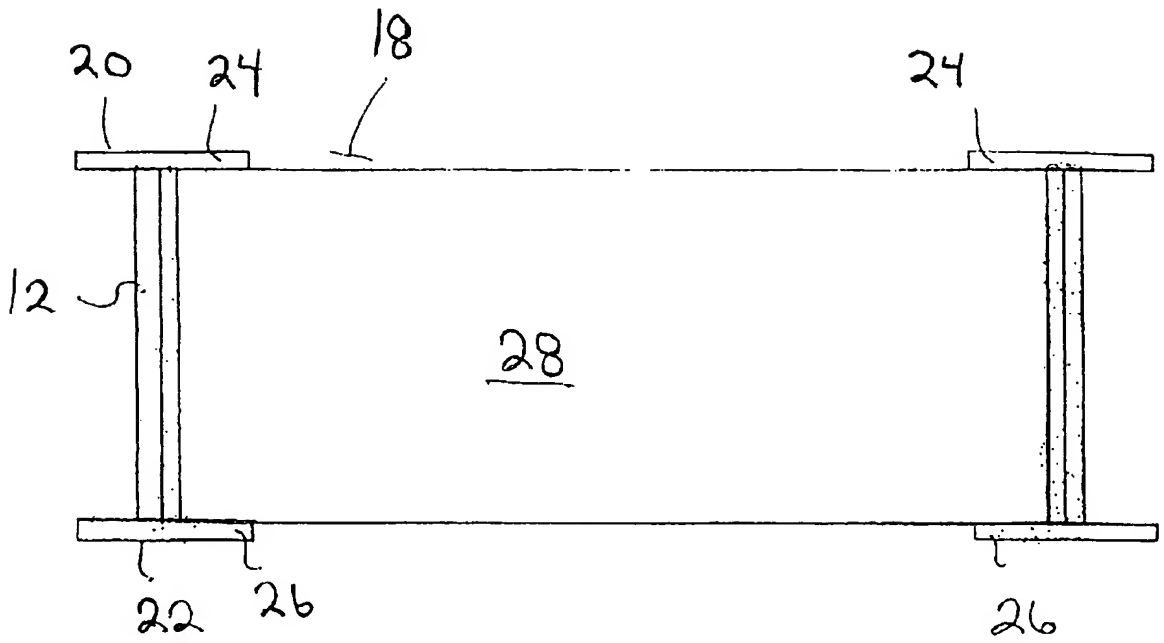


FIGURE 2

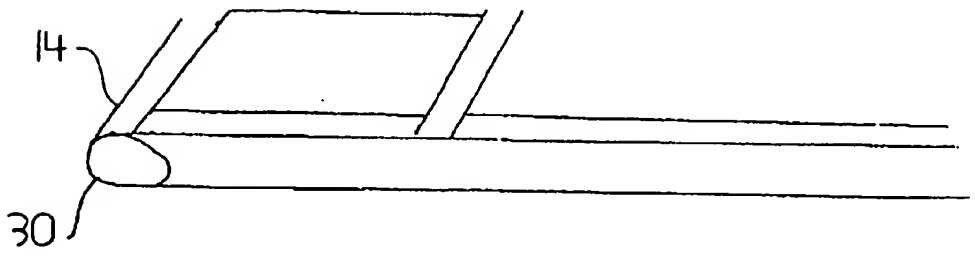


FIGURE 3

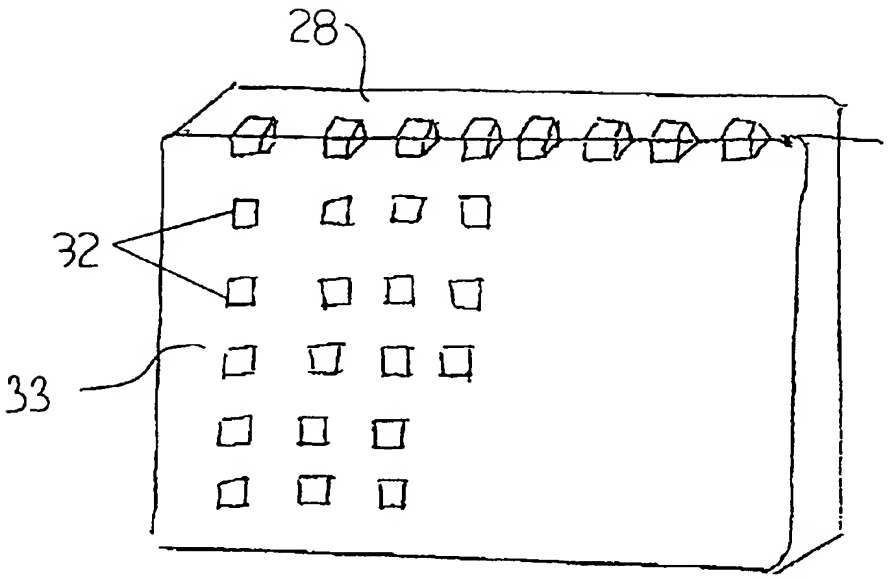


FIGURE 4

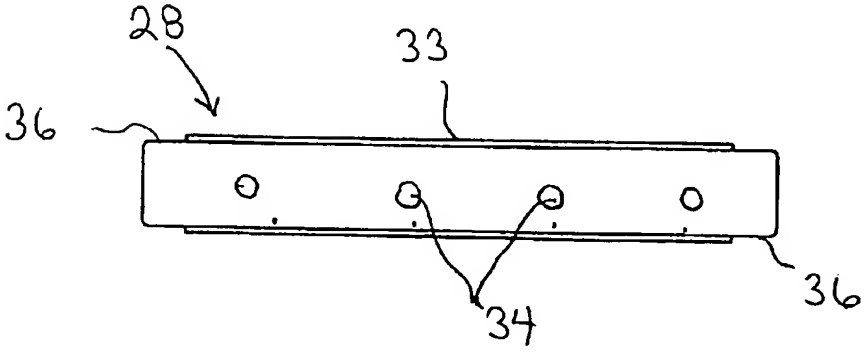


FIGURE 6

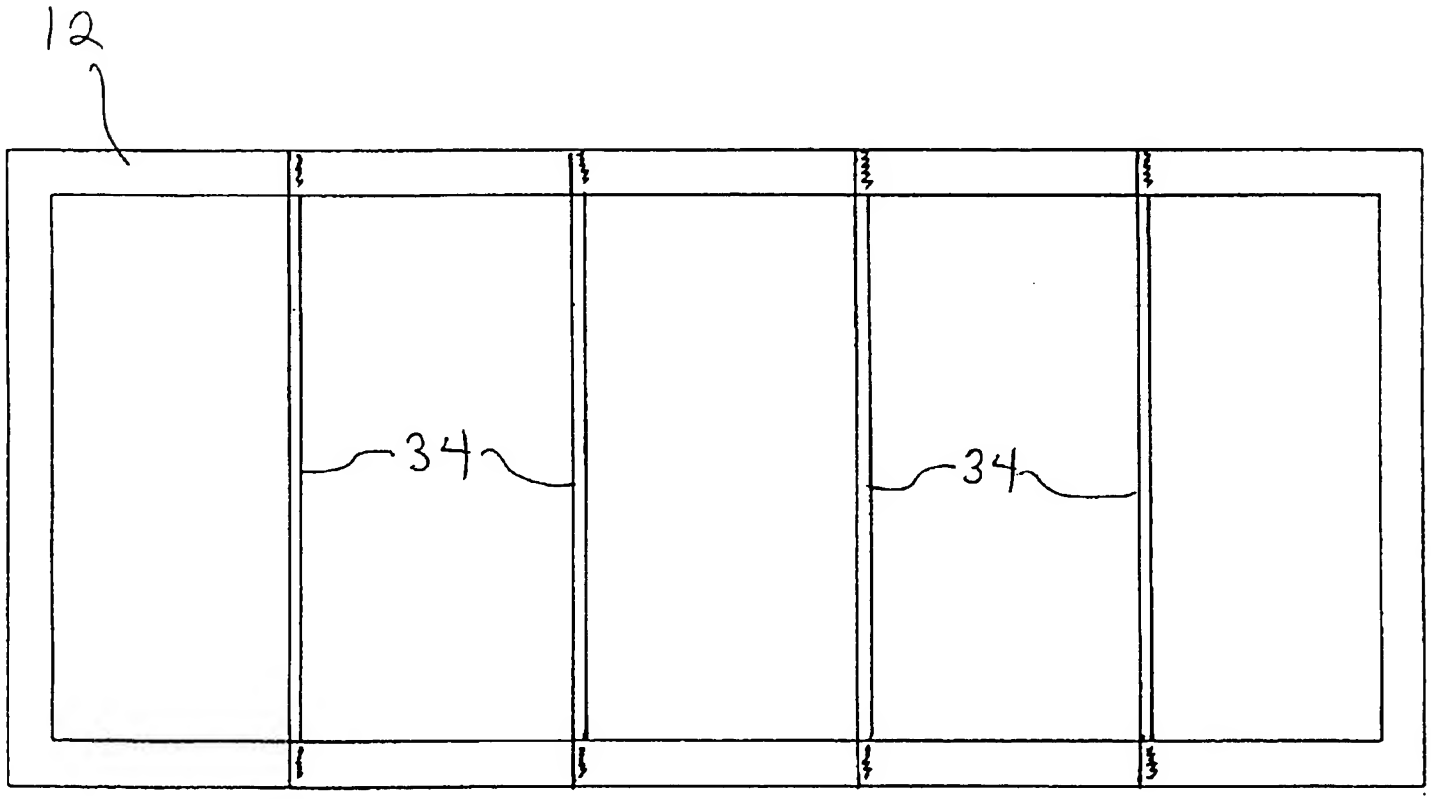


FIGURE 5